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KEVIN SAVETZ 14 May 2001

V.92 Modems: Will Dial-Up Access Get Faster?

A new breed of modems – referred to by the decidedly forgettable moniker of V.92 – is appearing on computer store shelves. They promise to add convenient features and squeeze every last ounce of speed from analog telephone lines. But don't rush to upgrade just yet – it will be a little while before Internet service providers actually support this new standard.

<http://www.v92.com/>

When they do, you can expect to hear these four V.92 features touted:

- Modem-on-Hold (also known as Internet call waiting) will be cause for celebration in single-phone-line households. The feature works with traditional call waiting, allowing you to answer an incoming call while you're online. After you hang up, you can resume with the Internet connection unperturbed. Unlike existing, proprietary Internet call waiting options, V.92's version won't require you to install special software or pay extra for a forward-when-busy service from the phone company.

- QuickConnect will reduce the time it takes to log in, cutting by half the training (or handshake) time in which the modems squeal and beep at each other to establish a connection. The first time your modem connects to your Internet provider, the modems walk up the available protocols until they agree on the highest common speed plus other features like compression. A V.92 modem memorizes information about the connection, which it uses for subsequent connections rather than taking time to renegotiate every time you dial in. It's not a dramatic improvement, but will save a few seconds every time you log on.

- Improved compression for faster downloads. Although these new modems have the same maximum download speed as today's V.90 modems – 53 kilobits per second (Kbps), a limit

set by Federal Communications Commission restrictions – they use a new compression protocol called V.44 that will make text and Web pages (both of which are highly compressible) download somewhat faster.

<http://www.v92.com/v44.htm>

- Faster uploads. A technology called PCM Upstream digitally encodes data the modem sends, increasing upload speeds to 48 Kbps from the speed limit of 33.6 Kbps, which dates back to the 1996 revision of the old V.34 standard. Latency for upstream data should also be reduced by 20 to 30 percent – not a significant factor, but it should help to improve performance for online gamers and video conferencing. [For background on latency, see Stuart Cheshire's "Bandwidth and Latency" articles beginning in TidBITS-367; for details on the workings of 56K modems, see Jeff Carlson's article in NetBITS-008. -Geoff]

<https://tidbits.com/getbits.acgi?tbser=1014>

<https://tidbits.com/getbits.acgi?nbart=04451>

(That mysterious V.whatever naming convention, incidentally, originates in Switzerland at the International Telecommunications Union, an organization that coordinates telecommunications networks and services. Protocols whose names start with "V." – which range from V.1 to V.300 – set standards for data communication over the telephone network.)

<http://www.itu.int/>

The Clogged End of the Pipe — Although several modem manufacturers have already released serial and USB V.92 models – any of which should work with a Mac – computer users can't enjoy any of the new features until Internet service providers upgrade their equipment to handle the new protocols, which will probably take months.

I expect the largest ISPs to begin offering trials of V.92 in the middle of 2001, with official rollouts toward the end of the year or the beginning of 2002. Smaller service providers may offer V.92 access sooner.

America Online, the biggest online provider of them all, has not yet committed to supporting V.92. "This version of consumer modem is only now arriving in the marketplace," said spokesman

Nicholas Graham. "As we did with the V.90 modem, we will thoroughly test and debug V.92 modems at the appropriate time."

Representatives of EarthLink and MSN, the second and third largest dialup providers, offered similar statements. "We'll begin testing V.92 as soon as we feel it's stable and reliable enough to incorporate into our systems," said Kurt Rahn, a spokesman for EarthLink. "At this point, though, we have no immediate plans to support it."

Replacing your current, working 56 Kbps modem with a V.92 model would be premature. But if you plan on purchasing a new modem anyway, it makes sense to buy a V.92-ready model. It will work with today's V.90 standard now; when your Internet provider is ready with V.92, you'll have the right hardware. Plus, there's no financial reason not to buy a V.92 modem, since they cost about the same as V.90 units. A search at the CNET Shopper price comparison service revealed street prices from about $65 to $150.

You may not even have to buy a new modem to enjoy these new features. Some modem manufacturers are planning to release free "flash upgrade" software that will update the internal software (or firmware) of certain recent modem models to support V.92. Most older modems aren't upgradable, though, since they lack the hardware power to handle the enhanced compression and call waiting features. Visit your modem manufacturer's Web site to find out if an upgrade will be available for your modem.

I asked Apple whether they will start to install V.92 modems in new Macs, and if they can provide a firmware upgrade for today's crop of internal Macintosh V.90 modems, but my calls were not returned.

The builders of both consumer modems and "head end" equipment – the communications hardware Internet service providers use – are in the process of fine-tuning their V.92 software. Many of the new features in V.92 are still being perfected. So even if you buy a new V.92 modem today, be prepared to flash-upgrade the hardware in a few months: this will assure you are using the latest and (theoretically) greatest firmware. It's too early to tell whether these flash updaters will be available for the Mac; if your modem's manufacturer only releases a PC-based updater, you may have to use a product like Virtual PC to run the updater or plug your modem into a friend's PC to inject V.92 support.

"We think it surely makes sense for folks who do not have 56K or whose modems break today, to invest in V.92 platforms, but we certainly expect that they will want to flash them as the services really do roll out," said Larry Hancock, marketing director at Zoom Telephonics, a major modem manufacturer which now owns both Hayes and Global Village.

<http://www.zoom.com/>

<http://www.hayesmicro.com/>

<http://www.globalvillage.com/>

With the ever-increasing hunger for high-speed Internet access and the decreasing cost of broadband services such as cable modems and DSL, analog modems may be living their twilight years – V.92 could be the last great modem standard. But for now, despite relatively slow speeds and a staid reputation, there's still a place for modem connections. After all, modem access is cheaper, simpler to set up, and available where broadband access isn't.

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<http://www.savetz.com/>

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